

## **REMARKS**

Claims 1-30, 36, 38-40, and 43 have been amended. Claims 1-44 remain pending in the application. Reconsideration is respectfully requested in light of the following remarks.

### **Specification:**

The Examiner objected to the specification as failing to provide proper antecedent basis for the claimed subject matter. Specifically, the Examiner submits that the specification fails to disclose “a computer readable medium,” as recited in claim 1. The specification has been amended to overcome the objection. Support for this amendment is found in at least original claims 1, 16, 18, and 29. Accordingly, no new matter has been added. Withdrawal of this objection is respectfully requested.

### **Section 101 Rejection:**

The Examiner rejected claim 18 under 35 U.S.C. § 101 because the claimed invention is directed to non-statutory subject matter. Claim 18 has been amended to remove the cited reference to “a network, wireline, wireless or other communications medium.” Therefore, Applicants respectfully request the removal of the rejection of claim 18 under 35 U.S.C. § 101.

### **Section 112, Second Paragraph Rejection:**

The Examiner rejected claim 20 under 35 U.S.C. § 112, second paragraph, as indefinite. Specifically, the Examiner notes that claim 20 recites, “the CAS-based non-blocking deque implementation of claim 19,” but claim 19 is silent on the element “CAS.” Claim 20 has been amended to overcome the rejection. Therefore, Applicants respectfully request the removal of the rejection of claim 20 under 35 U.S.C. § 112.

**Section 102(e) Rejection:**

The Examiner rejected claims 1-4, 6-10, 12-14, 16-22, 24, 26-33 and 35-44 under 35 U.S.C. § 102(e) as being anticipated by Martin et al. (U.S. Publication 2001/0047361) (hereinafter “Martin”). Applicants respectfully traverse this rejection for at least the following reasons.

Regarding claim 1, contrary to the Examiner’s assertion, Martin fails to disclose *wherein the single-target of the single-target synchronization primitive includes a value encoding for an element of the array and a version number encoded integrally therewith*. In remarks regarding original claim 6, the Examiner cites paragraph [0012] (CAS), paragraph [0019] (DCAS); paragraph [0123] (CAS, used to ensure a precise count of pushes and pops from each end); and paragraph [0141] (CAS, used to set the node’s next field to the distinguishing value RY). None of these passages, or anything else in Martin describes a version number, much less a version number that is integrally encoded with a value for an element of the array, or that this encoding is included in the single-target of the single-target synchronization primitive used in mediating concurrent execution of the access operations, all of which are required by claim 1. Instead, Martin teaches the use of CAS with a counter unrelated to a version of an array element, and a distinguishing (i.e., fixed) value RY to which a node’s next field may be set using CAS.

Applicants respectfully remind the Examiner that anticipation requires the presence in a single prior art reference disclosure of each and every limitation of the claimed invention, arranged as in the claim. M.P.E.P 2131; *Lindemann Maschinenfabrik GmbH v. American Hoist & Derrick Co.*, 221 USPQ 481, 485 (Fed. Cir. 1984). The **identical** invention must be shown in as complete detail as is contained in the claims. *Richardson v. Suzuki Motor Co.*, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). As discussed above, Martin fails to disclose *wherein the single-target of the single-target synchronization primitive includes a value encoding for an element of the array and a*

*version number encoded integrally therewith.* Therefore, Martin cannot be said to anticipate claim 1.

For at least the reasons above, the rejection of claim 1 is unsupported by the cited art and removal thereof is respectfully requested.

Independent claims 30, 40 and 43 include limitations similar to claim 1, and were rejected for the same reasons as claim 1. Therefore, the arguments presented above apply with equal force to these claims, as well.

Regarding independent claim 19, contrary to the Examiner's assertion, Martin fails to disclose *wherein shared storage usage of the deque implementation is insensitive to a number of access operations that concurrently access the deque.* The Examiner rejected claim 19 for the same reasons as claim 1. However, the scope of claim 1 and claim 19 differs. For example, claim 1 does not include a limitation similar to the above-referenced limitation of claim 19. **Since the Examiner failed to address the differences between claims 1 and 19, the Examiner has failed to state a prima facie rejection of claim 19.** In addition, Applicants assert that Martin is silent as to the above-referenced limitation of claim 19.

For at least the reasons above, the rejection of claim 19 is unsupported by the cited art and removal thereof is respectfully requested.

### **Section 103(a) Rejections:**

The Examiner rejected claims 5, 25 and 34 under 35 U.S.C. § 103(a) as being unpatentable over Martin in view of Rowlands (U.S. Publication 2003/0217115), and claims 11, 15 and 23 as being unpatentable over Martin in view of Latour (U.S. Publication 2002/0078123). Applicants respectfully traverse these rejections for at least the reasons given above in regard to their respective independent claims.

In regard to the rejections under both § 102(e) and § 103(a), Applicants assert that numerous ones of the dependent claims recite further distinctions over the cited art. Applicants traverse the rejections of these claims for at least the reasons given above in regard to the claims from which they depend. However, since the rejections have been shown to be unsupported for the independent claims, a further discussion of the dependent claims is not necessary at this time. Applicants reserve the right to present additional arguments.

## **CONCLUSION**

Applicants submit the application is in condition for allowance, and notice to that effect is respectfully requested.

If any fees are due, the Commissioner is authorized to charge said fees to Meyertons, Hood, Kivlin, Kowert, & Goetzel, P.C. Deposit Account No. 501505/6000-33800/RCK.

Respectfully submitted,

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